

AMENDMENTS TO THE CLAIMS

This listing of claims replaces all previous versions and listings of claims in this application.

Claim Listing:

1. (Currently amended) A track locking method for an optical disk drive, the method comprising the steps of:

generating a tracking servo output signal from a track error signal for driving an optical pick-up head to arrive at a target track;

determining an instantaneous level of the tracking servo output signal at the moment that the optical pick-up head was shifting to an adjoining off-track interval from an on-track interval of the target track; and

holding the tracking servo output signal at the instantaneous level ~~and~~ until the optical pick-up head moves to the on-track interval of the target track.

2. (Original) The track locking method for an optical disk drive of Claim 1, further comprising the steps of:

temporarily switching the optical pick-up head to an adjoining on-track interval after the optical pick-up head goes through half an off-track interval adjoining to the on-track interval of the target track; and

switching the optical pick-up head back to the target track by means of a short-seeking motion.

3. (Currently amended) A track locking method for an optical disk drive, the method comprising the steps of:

generating a tracking servo output signal from a track error signal for driving an optical pick-up head to arrive at a target track;

determining an instantaneous level of the tracking servo output signal at the moment that the optical pick-up head was shifting to an adjoining off-track interval from an on-track interval of the target track; and

intermittently holding the tracking servo output signal at the instantaneous level by using ~~a pulse width modulation method till~~ modulated signal until the optical pick-up head moves to the on-track interval of the target track.

4. (Original) The track locking method for an optical disk drive of Claim 3, further comprising the step of:

temporarily switching the optical pick-up head to an adjoining on-track interval after the optical pick-up head goes through half an off-track interval adjoining to the on-track interval of the target track; and

switching the optical pick-up head back to the target track by means of a short-seeking motion.

5. (Currently amended) A track locking apparatus for an optical disk drive, comprising:

~~a controller for generating that~~ generates a tracking servo output (TRO) signal in response to a track error (TE) signal;

~~a signal-holding unit capable of determining and holding a~~ that determines and holds a voltage level (V_{HOLD}) of the tracking servo output signal during an on-track interval of a target track; and

a switch ~~for switching~~ configured to connect the tracking servo output signal to the signal-holding unit ~~after in response to arrival of an optical pick-up head of the optical disk drive arrives at an adjoining off-track interval from an~~ the on-track interval of a target track.

6. (Currently amended) The track locking apparatus for an optical disk drive of Claim 5, ~~wherein the signal holding unit further includes~~ further comprising a pulse width modulation circuit ~~for outputting an intermittent signal~~ operatively connected to the signal holding unit.

7. (Original) The track locking apparatus for an optical disk drive of Claim 5, wherein the signal-holding unit is embedded in the controller.

8. (Currently amended) The track locking apparatus for an optical disk drive of Claim 5, wherein the switch ~~directly passes a driver~~ connects the tracking servo output signal ~~to a driver~~ when the optical pick-up head dwells in the on-track interval of the target track.

9. (Original) The track locking apparatus for an optical disk drive of Claim 5, wherein the switch is controlled by the controller.

10. (Original) The track locking apparatus for an optical disk drive of Claim 5, wherein the switch is embedded in the controller.

11. (New) The apparatus of claim 6, wherein the pulse width modulation circuit outputs the tracking servo output signal as a signal that periodically varies between a reference voltage and the voltage level V_{HOLD} .